

New and notable records of birds from Serengeti National Park

Thomas K. Gottschalk

Most ornithologists visiting Serengeti National Park (SNP) in Tanzania focus their activity around the southern plains and Lake Ndutu. As a result, little ornithological work has been undertaken in the more remote north and west of the park, especially in the evergreen forests of the Mara River and in the Western Corridor along the Grumeti, Orangi and Mbalageti Rivers. Poachers use the forested areas for cover (Campbell & Hofer 1995, Hofer *et al.* 2000) and walking is prohibited in the park, thus many wooded areas and parts without roads are rarely visited by ornithologists. However, many of these areas contain a number of birds which cannot be found in other parts of SNP.

Schmidl (1982) published a bird list for SNP of 496 bird species. Records since then have brought the total to 529 with more recent records being shown in Table 1. Recent contributions on different aspects of the SNP avifauna are found in Brett (1995), Gottschalk (2001a, 2002), Gottschalk *et al.* (2007), Baker & Baker (2002), Sinclair *et al.* (2002) and Trager & Mistry (2003).

Table 1. Bird species reported new for SNP since 1990.

English name	Scientific name	Reference
Blue Swallow	<i>Hirundo atrocaerulea</i>	Zimmermann <i>et al.</i> (1996), Baker & Baker (2002)
Half-collared Kingfisher	<i>Alcedo semitorquata</i>	Oatley (2001)
Black-backed Cisticola	<i>Cisticola eximius</i>	Gottschalk (2001b)
Grey-olive Greenbul	<i>Phyllastrephus cerviniventris</i>	Gottschalk (2002)
Red-capped Robin Chat	<i>Cossypha natalensis intensa</i>	Gottschalk (2002)
Green-backed Twinspot	<i>Mandingoa nitidula</i>	Gottschalk (2002)
Short-eared Owl	<i>Asio flammeus</i>	Stevenson & Fanshawe (2002)
Black-winged Pratincole	<i>Glareola nordmanni</i>	Baker & Baker (2002)
Yellow-whiskered Greenbul	<i>Andropadus latirostris</i>	Demey (2004)
Black-billed Barbet	<i>Lybius guifsobalito</i>	Demey (2004)
Black-rumped Buttonquail	<i>Turnix hottentota</i>	Leonard & Leonard (2004)
Little Weaver	<i>Ploceus luteolus</i>	Fry & Keith (2004)
Karamoja Apalis	<i>Apalis karamojae</i>	Shaw <i>et al.</i> (2005)
Pangani Longclaw	<i>Macronyx aurantiigula</i>	Baker <i>in litt.</i> (2005)

I report here 26 new species for SNP (marked by an asterisk) and observations of 46 species with few former records. Observations were made in almost all areas of the park between May 1999 and June 2000, January 2001, February 2005 and February 2006. These observations bring the SNP list up to 555 species.

Common and scientific names follow Stevenson & Fanshawe (2002) with recent changes taken from Fry & Keith (2004). Names of localities follow Tombazzi's (2003) map of SNP. The Raho dam is located in the northern part of the Western Corridor at the border between the National Park and the Grumeti Game Reserve. Photographs of mist-netted species can be viewed at www.cisticola.de and GPS coordinates of all bird records are available upon request. Additional information was provided by N. Baker from the database of the Tanzania Bird Atlas Project (TBAP) for the forthcoming Baker & Baker *The birds of Tanzania: an atlas of distribution and seasonality* (www.tanzaniabirdatlas.com).

Long-tailed Cormorant *Phalacrocorax africanus*

One was at the Raho dam on 15 January 2000. Schmidl (1982) notes only two records from the Grumeti and Orangi Rivers. This species is common in the nearby Speke Bay Gulf of Lake Victoria and records in the Serengeti area seem to have increased in recent years (N. Baker *in litt.* 2005, TBAP).

Rufous-bellied Heron *Ardea rufiventris* *

A male was at the Raho dam on 15 January 2000 and three single adult birds were north of the Mara River in various small swamps on 27 March 2000. Records of this species in the north of SNP are unsurprising since it is known from the nearby Mara Game Reserve (Zimmermann *et al.* 1996). The TBAP contains two further records of Rufous-bellied Heron for SNP (N. Baker *in litt.* 2005).

White-backed Night-Heron *Gorsachius leuconotos*

During the wet seasons on 24 May 1999 and 17 March 2000 a White-backed Night-Heron was seen feeding at night on the flooded bridge of the Grumeti River at Kirawira. The first documented sighting of this species was also at Kirawira (Kleinbaum & Alden 1983). The TBAP includes three further records of this species for SNP (Baker *in litt.* 2005).

Little Egret *Egretta garzetta* *

A single bird was seen at the Raho dam on 7 September 1999 and one bird was observed at Lake Ndotu on 22 March 2000. According to Zimmermann *et al.* (1996) this species is widespread on both fresh and alkaline waters. However, it was not included by Schmidl (1982). The TBAP includes more than 30 records for the Serengeti area (Baker *in litt.* 2005).

Western Banded Snake-Eagle *Circaetus cinerascens*

This uncommon species of riverine woodlands and forest patches (Zimmermann *et al.* 1996) was seen in the Mara region on 3 February 2000

with another bird at the Bolongonja Spring on 26 February 2000. These are the second and third records for SNP (Stronach 1990) and the TBAP has seven further records (N. Baker *in litt.* 2005).

Long-legged Buzzard *Buteo rufinus* *

A first year bird was circling above Seronera on 16 March 2000. While Stevenson & Fanshawe (2002) mention just a few records of this Palearctic migrant in Kenya and Tanzania, mainly from November–April, the TBAP includes 17 records for Tanzania (N. Baker *in litt.* 2005).

Greater Spotted Eagle *Aquila clanga* *

One was seen north of the Mara River for about five minutes, circling northwards on 4 February 2000. This scarce Palearctic vagrant has been recorded in Kenya between October and February. According to Baker (*in litt.* 2005) this is only the sixth record for Tanzania.

Booted Eagle *Hieraaetus pennatus* *

On 27 March 2000 a Booted Eagle was seen north of the Mara River. According to Zimmermann *et al.* (1996) this species is an uncommon but regular Palearctic migrant, but is absent from Schmidl's (1982) list for SNP. Of 204 records for Tanzania, only six have been in SNP (N. Baker *in litt.* 2005).

Amur Falcon *Falco amurensis*

Four female/immature birds were resting in trees on a koppie on the Serengeti Plains on 16 December 1999. Four more birds, including at least one male, were observed on the Musabi Plains on 6 May 2000. Only one record was listed by Schmidl (1982). According to Baker (*in litt.* 2005, TBAP) 11 records have been made in SNP to date.

Saker Falcon *Falco cherrug* *

This rare Palearctic migrant was seen flying low along a small dry stream close to Lake Magadi on 7 February 2000. The whitish crown of an adult bird was clearly visible. This is the sixth record for Tanzania (N. Baker pers. comm.).

Corncrake *Crex crex* *

One was flushed from long grass southeast of Seronera on 10 April 2000. The long legs and the rufous wing-coverts were clearly visible. Another was seen southeast of the Seronera airstrip on 19 April 2000. Although this species has been regularly recorded in the Mara GR in April (Zimmermann *et al.* 1996) it has not been reported from SNP though according to Baker (*in litt.* 2005, TBAP) six other records have been made in SNP to date.

Spur-winged Plover *Vanellus spinosus*

This species is quite common in the Mara region of SNP. A total of 24 birds in eight sightings were seen in 1999 and 2000. Most of these were close to the Mara River. One record is given in Schmidl (1982) on 20 August 1972 and a

second sight record is from Seronera in June 1962 (Baker 1994). This species has been recorded regularly in Speke Bay on Lake Victoria, which is located close to the park (Baker *in litt.* 2005, TBAP).

Violet-tipped Courser *Rhinoptilus chalcophterus*

One was seen and photographed east of the Serengeti Research Centre on 6 May 1999. Two records of this rare courser are reported in Schmidl (1982) though according to Zimmermann *et al.* (1996) Violet-tipped Courser is not known from northern Tanzania. According to Baker (*in litt.* 2005, TBAP) there are ten records from SNP to date.

Sanderling *Calidris alba*

Three birds were at Lake Magadi on 18 October 1999. Schmidl (1982) listed only one record, in March 1966, and it is rare inland.

Black-tailed Godwit *Limosa limosa*

Three birds were at Lake Ndotu on 24 August 1999. Schmidl (1982) reported only one record of this scarce species in September 1968. While up to 10000 birds winter in Tanzania (Baker 1997) there are only six other records from SNP to date (Baker *in litt.* 2005, TBAP).

Broad-billed Sandpiper *Limicola falcinellus* *

One was at Lake Ndotu on 20 July 1999. This is an early record for East Africa as most records of this uncommon Palearctic migrant are between August and April (Zimmermann *et al.* 1996).

Olive Pigeon *Columba arquatrix* *

Two birds were observed in Ingila forest in the north of SNP on 2 June 2000 and over three birds on 4 June 2000. The nearest known location for Olive Pigeon is in southwest Kenya (Zimmermann *et al.* 1996).

Tambourine Dove *Turtur tympanistris*

One bird was at Lamai guard post in the north of SNP on 9 May 2000. Schmidl (1982) only mentioned records from the Grumeti riverine forest.

Dusky Turtle Dove *Streptopelia lugens* *

One was seen in flight along the road which passes the Musabi Plains in the west of SNP on 24 October 1999. An immature bird was seen in flight by a road in the west of SNP on 18 April 2000. This highland species is known to wander widely (Stevenson & Fanshawe 2002).

Short-eared Owl *Asio flammeus*

A bird was flushed on the open plains in the southeast part of SNP on 5 January 2001 and another a day later. This species is a rare winter visitor with just a few scattered records in East Africa (Stevenson & Fanshawe 2002). Previous records for SNP have come from D. Richards and H. van Lawick (Baker *in litt.* 2005).

African Wood Owl *Strix woodfordii*

A single bird was seen perched and in flight in a forest along the Mara River in SNP on 16 January 2000. The only previous dated record is from Kempinigati from 1960 (Schmidl 1982), but according to Zimmermann *et al.* (1996) the species is recorded in Mara GR.

Plain Nightjar *Caprimulgus inornatus* *

On 25 and 26 March 2000 single Plain Nightjars were flushed in the north of SNP. Up to five individuals were perched under small bushes and were flushed several times. This intra-african migrant has usually been recorded in Tanzania east of the Rift Valley (Fry *et al.* 1988, Zimmermann *et al.* 1996).

Madagascar Bee-eater *Merops superciliosus*

Seven new records were made in SNP mainly from the Western Corridor at Kirawira, Grumeti River, during May and June and in the beginning of September. More than 100 birds were seen on 6 September 1999 and between 30 and 50 birds were resting at Grumeti River on 6 May 2000. Three sightings were made away from the Grumeti River: several birds were seen at the Seronera River on 2 May 1999; three birds were seen on the Serengeti Plains (02°50'S, 35°09'E) on 13 May 2000 and three were seen at the Kenyangaga River on 10 May 2000. Schmidl (1982) only reported one dated record of Madagascar Bee-eater, in August 1974.

Cinnamon-chested Bee-eater *Merops oreobates*

On 26 March 2000 two adults and one juvenile bird were seen on the steep slope of the Isuria escarpment north of Kenyangaga guard post. A second record of a single bird was made at the same escarpment on 27 March 2000. The only other Serengeti record of this species was near the Mara River (Schmidl 1982). However this species is distributed in the Mara GR (Zimmermann *et al.* 1996).

Yellow-rumped Tinkerbird *Pogoniulus bilineatus*

Two birds were seen at the Isuria escarpment north of Kenyangaga guard post on 26 March 2000. Only one record is given in Schmidl (1982).

Somali Short-toed Lark *Calandrella somalica* *

Although the Somali Short-toed Lark is not reported for SNP I found the species breeding on intermediate grasslands. One bird was feeding young in the east part of the Serengeti plains in May 1999. The species was present on three out of ten grassland study plots in 2000 (Gottschalk *et al.* 2007). The breeding density estimated by territory mapping (Bibby *et al.* 2000) differed between the grasslands. West of Simba Koppie it was 0.4 territories/10 ha, east of Maasai Kopjes it was 5.7 territories/10 ha and on the Togora Plains it was 0.8 territories/10 ha.

Rufous-chested Swallow *Hirundo semirufa*

Two birds were at the Lamai guard post on 4 February 2000 and additional

single birds north of the Mara River on 3 and 27 February, 14 April and 3 June, all in 2000. Schmidl (1982) gives only two dated records of this species.

Blue Swallow *Hirundo atrocaerulea*

One Blue Swallow was in a swampy grassland north of Mara River on the 5 June 2000. This rare swallow is known to winter in western Kenya and has been recorded once in SNP on 12 August 1994 (Baker & Baker 2002). It is most probably a regular visitor during the non-breeding season to the Mara River valley since there are several more records in the TBAP database (Baker *in litt.* 2005).

Pangani Longclaw *Macronyx aurantiigula*

During the wet season of 1999 and 2000 Pangani Longclaws were widely distributed throughout Serengeti (16 observations of 18 birds) with their main distribution in the long grasslands of the Serengeti Plains. One bird carrying food was seen in grasslands south of the Seronera airstrip on 2 May 1999 and exactly one year later a nest containing three eggs was found in the east of SNP close to the Ngorongoro Conservation Area. The breeding site was within the transition zone between the open plains and the woodlands and was characterized by grassland interspersed by small bushes and single trees. Pangani Longclaw has not been reported breeding in SNP before. According to Baker (*in litt.* 2005, TBAD) the first record of this species for SNP was in March 1998 by P. Roberts. The range of the species is expanding within East Africa.

Grey Cuckoo-shrike *Coracina caesia*

A male and a female were seen south of the Mara GR in the Ingila Forest on 2 June 2000. One observation is reported in Schmidl (1982) from the Grumeti River in August 1970 and according to Zimmermann *et al.* (1996) the species is reported for northwest Mara GR.

Cabanis's Greenbul *Phyllastrephus cabanisi*

Between two and four birds were recorded at Ingila forest in the Mara area in the northern part of SNP on 2 and 4 June 2000. The only other records of this species are from Kittenberger who collected specimens at the Mara River (Schmidl 1982). The next nearest locality is Trans-Mara (Zimmermann *et al.* 1996).

Red-capped Robin-Chat *Cossypha natalensis*

Besides the first Serengeti record at the Grumeti River (Gottschalk 2002) additional birds were seen at Ingila forest in the Mara region. Two birds were observed on 2 June 2000 and an additional one was singing in the same forest on 4 June 2000. The nearest known locality for this species is Mara GR (Zimmermann *et al.* 1996).

Eurasian Reed Warbler *Acrocephalus scirpaceus* *

One bird was trapped at the forest of the Kenyangaga River on 10 May 2000.

This bird was presumably on northward passage, which takes place up to early May (Urban *et al.* 1997).

River Warbler *Locustella fluviatilis* *

One bird was seen on its northward passage in a bush close to a koppie on the plains of SNP on 10 April 2000. There are only 17 records for Tanzania (Baker *in litt.* 2005, TBAD).

Little Rush Warbler *Bradypterus baboecala* *

This species was recorded two times at Bolongonja Spring forest. One bird was singing in a wet area of the forest on 17 January 2000 though none were found during two further visits in February. However, three were singing in another swamp close to the Bolongonja forest on 9 January 2001. Schmidl (1982) did not note Little Rush Warbler and the next nearest location is the Mara GR (Urban *et al.* 1997, Zimmermann *et al.* 1996).

Common Whitethroat *Sylvia communis* *

A Common Whitethroat was seen in the southeast of SNP on the open plains near a koppie on 16 December 1999. Another bird was observed in a small bush close to the Mara River on 3 February 2000. On 10 April 2000 three were seen at the Barafu Koppie and one bird was recorded on Naabi Hill on 3 March 2006. These records suggest that Common Whitethroat is a rare but regular migrant in Serengeti. Although this Palaearctic bird is a common migrant in the east of the Rift Valley (Baker *in litt.* 2005, TBAD) it has seldom been recorded in the west of the Rift (Urban *et al.* 1997, Zimmermann *et al.* 1996).

Brown Parisoma *Parisoma lugens* *

A single bird was seen at a koppie on the plains in the southeast of SNP on 22 March 2000. Although koppies on the plains were regularly visited this was the only record. The nearest known localities for this species are Loliondo and Norongoro Conservation Area (Baker *in litt.* 2005, TBAD).

Broad-tailed Warbler *Schoenicola brevirostris*

In 2000 the species seemed to be common in moist grassland in the Mara region during the wet season. Single birds were recorded in grasslands close to forest edges mainly of the Kenyangaga River and one bird was mist-netted at the Kenyangaga River on 10 May 2000. Away from the north one was seen in lush grasslands on the Musabi Plains in the Western Corridor on 5 June 1999. While Schmidl (1982) mentioned two records of this species for SNP, according to Urban *et al.* (1997) the Broad-tailed Warbler is not found in SNP. However, Zimmermann *et al.* (1996) mentioned the species as not uncommon in Serengeti.

African Moustached Warbler *Melocichla mentalis*

This warbler was abundant in long rich grassland throughout the Mara region of SNP. Eight records of 16 birds in total were made in this region during

1999 and 2000. Additionally, one bird was seen north of Seronera, close to the Orangi River on 23 April 2000. Only one bird was seen by Stronach (1990) in 1985.

Wailing Cisticola *Cisticola lais* *

Wailing Cisticola was regularly recorded on the rocky hills northwest of the Lobo Lodge. One bird was calling on 31 October 1999 and more than four birds were recorded on 14 December 1999. One bird was mist-netted and between two and four were seen at the Klombeti Hills on 11 May 2000. Between two and four birds were counted on 24 April 2000 and on 11 May 2000. Zimmermann *et al.* (1996) mentioned the species for the Gol Mountains, which are located east of SNP.

Red-faced Cisticola *Cisticola erythrops* *

One Red-faced Cisticola was mist-netted at the edge of the Ingila forest (01°38.12'S, 34°47.97'E) on the 2 June 2000. According to Zimmermann *et al.* (1996) the species should be distributed in SNP, but I found it to be rare and only in the north of the park.

Trilling Cisticola *Cisticola woosnami* *

This species was a common and sedentary species close to forests or in scattered wooded areas of the Serengeti Mara region ranging from the Isuria escarpment to the Ingila forest. Nine records of 21 birds were made between July 1999 and June 2000. One bird was mist-netted at the edge of the Ingila forest on 2 June 2000 and one adult and two juveniles were seen at Ingila forest on 4 June 2000. Trilling Cisticola is common in northern Tanzania (Baker *in litt.* 2005, TBAD) and in northwest Mara GR (Zimmermann *et al.* 1996).

Siffling Cisticola *Cisticola brachypterus* *

In 2000, singing Siffling Cisticolas were recorded from several sites, mainly throughout the central and southeast of SNP, always in areas of wooded grassland or grassland at the edges of the woodlands. Between one and seven singing birds were seen in a 25 ha wooded grassland area north of Lobo between January and June 2000. One bird was mist-netted in the same area on the 6 June 2000. 24 birds in 16 different locations were seen in the east of SNP in the transition zone between the plains and the woodlands between 21 January and 8 June 2000. Additional records were made on the Togora and Ndabaka Plains. Although this species was not mentioned for SNP by Zimmermann *et al.* (1996) it is reported from northern Tanzania (Urban *et al.* 1997).

Grey-capped Warbler *Eminia lepida*

This species seems to be restricted to the forest of the Bolongonja Spring in the north of SNP, where it is common. Up to six birds were seen at this location between January 2000 and January 2001. One specimen was mist-netted on 8 January 2001. Schmidl (1982) mentioned only one record, from the Grumeti

River, and according to Urban *et al.* (1997) the Grey-capped Warbler is rare in the Serengeti.

Olivaceous Warbler *Hippolais pallida*

Seven birds were seen on six occasions, mostly in the northern part of SNP between December and March. One bird was mist-netted at the Serengeti Research Institute on 16 March 2000. Only one record is listed in Schmidl (1982).

Blackcap *Sylvia atricapilla*

This palaeartic migrant seems to be very rare in SNP, as I recorded it only once: a pair at the Lobo Hills on 14 December 1999. Schmidl (1982) reported one record in November 1970.

Karamoja Apalis *Apalis karamojae*

One was east of the Seronera Research Centre on May 1999. Others were seen at Togora Plains on 14 July 1999 and on 7 September 1999. This little known species is patchily distributed in Uganda and Tanzania. D. Moyer encountered several groups in SNP in 1993 (Shaw *et al.* 2005). Seven additional records have been made by P. Shaw (*in litt.* 2004) in the Western Corridor of Serengeti on 26 July 2003.

Semi-collared Flycatcher *Ficedula semitorquata* *

A male was seen and photographed on the Naabi Hill on 3 March 2006. The bird was shy and restless. According to Schmidl (1982) the species has not been recorded before in SNP.

Swamp Flycatcher *Muscicapa aquatica*

This species was seen several times at Kirawira on the Grumeti River camp, including 26 May 1999, 16 July 1999, 28 January 2000, 16 April 2000 and 7 May 2000. This small flycatcher is a common bird around Lake Victoria though Schmidl (1982) mentioned only one record of two birds in SNP.

African Blue-Flycatcher *Elminia longicauda* *

One was seen in a small gallery forest along the Kenyangaga River on 25 and 26 of March 2000. This species is restricted in Tanzania to the northwest (Urban *et al.* 1997).

Red-chested Sunbird *Cinnyris erythrocerca*

A male was at the Grumeti River camp in the western part of SNP on 16 July 1999 and 17 March 2000. According to Fry *et al.* (2000) this species is restricted within northern Tanzania to the shores of Lake Victoria.

Collared Sunbird *Anthreptes collaris*

I saw the species ten times in total in the Mara forests, in the Bolongonja forest and in the riverine forests of the Grumeti and Mbalageti Rivers. Only one record is mentioned by Schmidl (1982).

Woodchat Shrike *Lanius senator* *

A male was seen and photographed on a small bush southeast of Seronera on 28 April 2000. This was the second record for Tanzania (Baker *in litt.* 2000). Another male was seen and photographed south of the Seronera air strip on 24 February 2005. Most records from western Kenya are between October and March. However, there are late records from Uganda in mid April and from northeast Zaire in late April (Fry *et al.* 2000).

Marsh Tchagra *Tchagra minuta*

A male Marsh Tchagra was recorded on 27 March 2000 north of the Mara River and close to the Isuria escarpment. The bird was singing from rank vegetation along a dry stream. Schmidl (1982) mentioned two records of this species from the Grumeti River and Fry *et al.* (2000) mentioned the bird only for the northern Serengeti.

Yellow White-eye *Zosterops senegalensis*

This species seems to be scarce in well-forested or wooded areas especially in the Mara region. Away from this area one bird was at Kimasi on 26 October 1999 and one at the Isuria escarpment north of Kenyangaga guard post on 26 March 2000. Two were mist-netted in the Ingila forest on 2 June 2000. Only one record is listed in Schmidl (1982) at the Orangi River in June 1970.

Chestnut Weaver *Ploceus rubiginosus* *

A pair was displaying in grasslands south of Seronera on 30 April 2000. According to Schmidl (1982) and Zimmermann *et al.* (1996) the species is absent from SNP and the entire north of Tanzania. However the status of the species has changed in recent years and now it is locally abundant and breeding in northern Tanzania (Baker *in litt.* 2005, TBAP).

Grosbeak Weaver *Amblyospiza albifrons*

One was in a swamp north of the Mara River on 27 March 2000. The only published record of this species is an individual seen north of SNP (Schmidl 1982).

Little Weaver *Ploceus luteolus*

On the 24 October 1999 a male and two females were in trees at the Grumeti River, Kirawira. The only other record of this species is from northern SNP near the Kenya border (Fry *et al.* 2004).

Parasitic Weaver *Anomalospiza imberbis*

A single bird was seen in moist grassland on the Musabi Plains on 27 May 1999 and on 1 April 2000. Another was seen at the Raho dam on 15 January 2000. Schmidl (1982) mentioned only three dated records from moist grasslands.

Red-collared Widowbird *Euplectes ardens*

Between two and three males were observed in grasslands close to the Kenyangaga River on 10 May 2004. Although the Red-collared Widowbird

is known from Mara GR (Fry *et al.* 2004), Schmidl (1982) mentioned only one record for SNP, from the Tarina River in March 1952.

Red-headed Quelea *Quelea erythrops*

Two males and several females were in the Western Corridor on the Ndabaka Plains on 29 May 2000. Schmidl (1982) listed two undated records for SNP although the distribution map in Fry *et al.* (2004) does not show these records.

Southern Citril *Serinus hypostictus* *

On the 26 March 2000 two birds were singing at the Isuria escarpment north of Kenyangaga guard post at the Kenyan border. Three more Southern Citrils were observed at the same escarpment on 27 March 2000. The species could not be found elsewhere in SNP.

Acknowledgments

I thank the Tanzania Commission for Science and Technology (COSTECH), the Tanzania National Parks (TANAPA) and the Tanzania Wildlife Research Institute (TAWIRI) for permission to work in the SNP. I gratefully acknowledge the assistance of F.M. Chalamila in the field. The fieldwork was supported by the German Academic Exchange Service (DAAD). Thanks go to Neil Baker and D.A. Turner for many fruitful discussions about Tanzanian birds.

References

- Baker, N.E. 1994. The Spur-winged Plover *Vanellus spinosus* in Tanzania. *Scopus* 18: 130–132.
- Baker, N.E. 1997. *Tanzania waterbird count*. 1995. Dar es Salaam: Wildlife Conservation Society of Tanzania.
- Baker, N.E. & Baker, E.M. 2002. *Important Bird Areas in Tanzania: A first inventory*. Dar es Salaam: Wildlife Conservation Society of Tanzania.
- Bibby, C.J., Burgess, N.D., Hill, D.A. & Mustoe, S. 2000. *Bird census techniques*, 2nd editon. London: Academic Press.
- Brett, J. 1995. Migration of Lesser Kestrels in the Serengeti National Park, Tanzania. *Journal of African Raptor Biology* 10: 63.
- Campbell, K. & Hofer, H. 1995. People and Wildlife: Spatial dynamics and zones of interaction. Pp. 534–570 in Sinclair A.R.E. & Arcese, P. (eds) *Serengeti II, dynamics, management, and conservation of an ecosystem*. Chicago: The University of Chicago Press.
- Demey, R. 2004. Recent reports. *Bulletin of the African Bird Club* 11(2): 168–182.
- Fry, C.H., Keith, S. & Urban, E.K. (eds) 1988. *The birds of Africa*. Vol. 3. London: Academic Press.
- Fry, C.H., Keith, S. & Urban, E.K. (eds) 2000. *The birds of Africa*. Vol. 6. London: Academic Press.
- Fry, C.H. & Keith, S. (eds) 2004. *The birds of Africa*. Vol. 7. London: Christopher Helm.
- Gottschalk, T.K. 2001a. Massive stork party in Serengeti National Park, Tanzania. *Africa Birds & Birding* 6(3): 16.

- Gottschalk, T.K. 2001b. Black-backed Cisticola *Cisticola eximius* a new species for Tanzania. *Bulletin of the African Bird Club* 8(2): 135–137.
- Gottschalk, T.K. 2002. Birds of a Grumeti River forest in Serengeti National Park, Tanzania. *Bulletin of the African Bird Club* 9(2): 153–158.
- Gottschalk, T.K., Ekschmitt, K. & Bairlein, F. In press. Relationships between vegetation and bird community composition in grasslands of the Serengeti. *Journal of African Ecology* 45.
- Hofer, H., Campbell, K.L.I., East, M.L. & Huish, S.A. 2000. Modelling the spatial distribution of the economic costs and benefits of illegal game meat hunting in the Serengeti. *Natural Resource Modelling* 13: 151–177.
- Kleinbaum, M. & Alden, P. 1983. A pair of White-backed Night Herons *Gorsachius leuconotus* in Serengeti National Park, Tanzania. *Scopus* 7: 90–91.
- Leonard, P. & Leonard, A. 2004. Black-rumped Buttonquail *Turnix hottentota* in Serengeti National Park, Tanzania. *Scopus* 24: 46–47.
- Oatley, T.B. 2001. Some range extensions of birds in northern Tanzania. *Scopus* 22: 72–75.
- Schmidl, D. 1982. *The birds of the Serengeti National Park Tanzania. An annotated check-list.* B.O.U. Check-list No. 5.
- Shaw, P., Mungaya, E., Mbilinyi, N. & Mbilinyi, M. 2005. The voice and bill length of Karamoja Apalis *Apalis karamojae* are atypical of the genus. *Bulletin of the British Ornithologists' Club* 125: 122–129.
- Sinclair, A.R.E., Mduma, S.A.R. & Arcese, P. 2002. Protected areas as biodiversity benchmarks for human impact: agriculture and the Serengeti avifauna. *Proceedings of the Royal Society B: Biological Sciences* 269: 2401–2405.
- Stevenson, T. & Fanshawe, J. 2002. *Field guide to the birds of East Africa.* London: T. & A.D. Poyser.
- Stronach, N.R.H. 1990. New information on birds in Serengeti National Park, Tanzania. *Bulletin of the British Ornithologists' Club* 110: 198–202.
- Tombazzi, G. 2003. *New Map of Serengeti National Park, wet and dry season.* Arusha: Maco Editions LLC.
- Trager, M. & Mistry, S. 2003. Avian community composition of kopjes in a heterogeneous landscape. *Oecologia* 135: 458–468.
- Urban, E.K., Fry, C.H. & Keith, S. (eds) 1997. *The birds of Africa.* Vol. 5. London: Academic Press.
- Zimmermann, D.A., Turner, D.A. & Pearson, D.J. 1996. *Birds of Kenya and northern Tanzania.* London: A. & C. Black.

Thomas K. Gottschalk

Justus Liebig University, Department of Animal Ecology, Heinrich-Buff-Ring 26-32, 35392 Giessen, Germany. E-mail: thomasgottschalk@surfeu.de

Scopus 26: 10-21, January 2007

Received 7 August 2006